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AN

ESSAY

ON THE

CHANGES

PRODUCED IN THE

BODY

BY

OPERATIONS

OF THE

MIND.

BY THE LATE

DOCTOR CORP, M.D. OF BATH.

——Caput esse quasi, et dominari in corpore toto
————, quod nos Animum Mentemque vocamus.

LUCRETIUS.

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PREFACE.

THE diſcuſſion of ſubjects which relate to the operations of the Mind muſt be ever difficult, from the obſcurity in which they are involved. Thoſe which are comprehended in the preſent Eſſay, afford no certain data; the Author, therefore, may be allowed to aſſume ſuch as his imagination ſuggeſts, provided their conſequences do not lead to miſchief in their application. On this preſumption he ventures to publiſh what hath been the amuſement of his leiſure hours, hoping, that if uſeleſs, it will be at the ſame time harmleſs.

In diſcourſing on emotions and paſſions, it is not his intention to ſpeak of the whole

or all the modifications of them, which are enumerated by the pneumatologiſt; but to confine himſelf to the conſideration of thoſe which may be deemed *purely mental*, as originating in the Mind, and not excited by, or blended with, corporeal ſenſation. Of this deſcription are Hope, Joy, Anger, Fear, Grief, Anxiety.

As theſe are found to act conſiderably on the bodies of men, he is lead to treat of them; but as the beſt ſyſtems of Ethics have failed in producing thoſe effects in ſociety their authors have anxiouſly hoped for; we cannot ſuppoſe that what may be advanced concerning the operations of the Mind will be attended to in the mere temporary preſervation of health.

However this may be, it is not improbable, that thoſe who labour under the *immediate preſſure of diſeaſe*, will readily liſten to every admonition which has the remoteſt tendency

tendency to reſtore health : for as the ſchool of adverſity awakens the heart to ſenſibility, and diſpoſes to acts of moral virtue, ſo the bed of ſickneſs gives birth to reflections that induce the Mind to comply with ſalutary requiſitions.

In ſpeaking of the principle of life, the Author wiſhes to be underſtood, as ſpeaking of a vital power given by the Creator of nature to animal bodies poſſeſſing certain organs adapted to retain it ; at the ſame time theſe acquire from it that invigoration which qualifies them for the purpoſes of action. Hence a certain ſtate of organization is as neceſſary to the retention of the principle of life, as that principle is to ſupport the action of organized bodies.

Having thus premiſed, the Author hopes the following Eſſay will be peruſed with that complacency and candor which its imperfections require.

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ESSAY,

AN

ESSAY, &c.

CHAP. I.

Of the Dependance of Mind and Body on each other.

THE close connection which subsists between the Mind and Body, renders the welfare of either, of considerable importance to each. For as health on the one hand materially contributes to support a vigorous state of Mind, so on the other, animating or pleasing ideas essentially tend to preserve a vigorous state of Body.

By diſeaſe the mental faculties are in general more or leſs impaired, and by the operation of any diſtreſſing or unpleaſant reflection the corporeal functions are liable to be interrupted, or oppreſſed. This influence of the Mind on the Body is not, however, univerſally prevalent, or equally apparent in every country; for among the hardy tribes of men whom the refinements of civilization have not reached, the Mind itſelf being of an auſtere diſpoſition, and inſenſible to the more tender and ſympathetic emotions, is unable to affect the functions of bodies which are equally inſenſible: but in thoſe parts of the world where the Mind is humanized by the culture of ſocial and benign virtues, and the bodies of men are ſoftened by the operation of climate, every *intereſting thought* may occaſion ſome change in the animal economy. The truth of this obſervation will, I doubt not, be confirmed by the teſtimony of moſt perſons who call to remembrance particular occurrences; and were we acquainted with the private hiſtory of individuals, we ſhould, I apprehend, be enabled to adduce many examples in ſupport

of

of it. In my profeſſional capacity, I have often ſeen patients, where bodily complaints originated purely from a diſcompoſed ſtate of Mind, in conſequence of the frequent interference, or perpetual operation, of ſome intereſting reflection.

If we carry our obſervations farther, and conſider the ſtrong emotions and paſſions which ſometimes ariſe in the Mind, and the conſtant agitations of Body, we muſt conclude, that by *their* operation the more delicate organs of the human ſyſtem will be affected. Who, for example, can look on a man who is agitated by a violent paroxyſm of anger and reſentment? or on one who totters under the apprehenſion of ſome dreadful calamity, without readily conceiving that by mental perturbations, health may be interrupted or totally deſtroyed?

Sanctorius, who by ſtatical experiments endeavoured to aſcertain how far certain conditions of the Mind were able to affect the Body, obſerved, that the latter, even in a ſtate of quiet, perſpired more, and became

 lighter,

lighter, when the former was much diſturbed, than when it underwent the moſt rapid movements, provided the Mind were at the ſame time diſengaged and free.*

The Body, however, is not only liable to be affected by intereſting thoughts, and by thoſe more eſpecially which raiſe commotions and paſſions in the Mind; but alſo by the exerciſe of the mental faculties, on ſubjects which have no particular reference to our happineſs or miſery. This poſition we hope preſently to illuſtrate by ſome reflections on the changes induced in the ſyſtem, by a ſimple attention of the Mind to what is paſſing, as well as by a cloſe and ſteadfaſt application of it, in the hours of ſtudy. For this purpoſe it will be neceſſary to treat of thoſe peculiar properties of the human body, on which its functions chiefly depend.

* Corpus quieſcens magis perſpirat et minoris ponderis fit, ſi animo vehementer agitentur, quam ſi celerrimè corpus moveatur, animo permanente otioſo.

CHAP.

CHAP. II.

Of Senſibility and Mobility.

IT is well known that the functions of the human machine depends chiefly on thoſe parts of it, which are endowed with Senſibilty, and Mobility, or Power of motion.

The word *Senſibility* is in general underſtood to expreſs a property of the body, by which applications to it excite ſenſations in the Mind. I ſhall, however, employ the word to ſignify alſo the faculty of *ſimple ſenſation*, or a certain capacity of feeling, which *living* animal matter poſſeſſes, unattended by *conſciouſneſs*. It is this faculty of *ſimple ſenſation* that diſpoſes the involuntary organs to be affected by their *natural* ſtimuli, and the exiſtence of it appears to be abſolutely neceſſary to render moveable parts irritable, or capable of being excited to action by cauſes applied. This opinion has, I think, been very ably maintained by Dr. Whytt, in his

his controverſy with the celebrated Haller, who, in delivering an oppoſite doctrine, ſeems to contradict himſelf, when he ſpeaks of parts which are *not irritable*, as not *feeling* or *perceiving* the acrid matter, or other ſtimuli applied to them. We never, as Dr. Whytt obſerves, talk of *irritating* a ſtone or a piece of wood, a tree, or indeed any thing that is deſtitute of *feeling*. Irritability, therefore, in the common acceptation of the word, muſt imply *ſome kind* of *feeling*.

Gaubius obſerves, that we may conceive two faculties to exiſt in the living ſolid; the one a faculty as it were of *Senſe*, by which it perceives in ſome peculiar manner, the action of a ſtimulus, the other a faculty of motion.* It is therefore evident, that this Profeſſor alſo thought that moveable parts ſhould poſſeſs *ſome ſhare* of Senſibility, to qualify them to receive thoſe impreſſions which are neceſſary to excite their action.

* Duas in ſolido vivo concipere facultates licet; alteram quaſi ſentiendi qua ſtimuli actionem ſuo quodam modo percipit; alteram movendi qua ſeſe contrahendo vim vi opponit ac repellit veluti quod quietis ſuæ ſtatum turbat.

It

It is very certain that thoſe moveable parts which are *moſt ſenſible* are *moſt irritable*; ſo that if at any time the ſenſibility of a muſcular organ be increaſed, its action is oftener and more readily excited than uſual. When, for example, a part is inflamed, the ſenſibility of its arteries is ſo increaſed, that the ſtimulating influence of the blood occaſions in them the moſt accelerated motion.

When the ſenſibility of the ſtomach is increaſed by inflammation, it becomes ſo irritable, that not only the ſtimulus of common food acts violently upon it, but even the mildeſt kind of liquids throw it into the moſt convulſive diſorder. Thoſe ſtimulating powers which are deſigned by nature to act on other muſcular organs, do alſo, when the ſenſibility of theſe is increaſed, excite their action too frequently. This is the caſe when the ſenſibility of the inteſtines, or bladder, is increaſed; the evacuations of the former become immoderate, and the efforts of the latter to empty itſelf, too frequent and exceſſive. On the other hand, if the Senſibility of moveable organs be *diminiſhed*, thoſe ſtimuli which are appointed

to excite their proper action, will be insufficient, and the system thereby exposed to all the evils of stagnation. We therefore conclude, that the *healthy state* of an organ may be primarily destroyed, by any cause which *increases*, or *diminishes to a certain extent*, its Sensibility. This, however, must only be considered as *one way* in which the healthy condition of an organ may be changed; for although its Sensibility be neither increased nor diminished, its health may be destroyed by an increase, or diminution, in the force of those causes to which it hath been accustomed, or by the application of others, to which it hath never been exposed.

That portion of Sensibility which is sufficient for *simple sensation*, as well as that degree of it which renders us conscious of impressions, is dependant on the brain; for although parts capable of *simple feeling* may retain it some little time after they have been separated from the body; yet their nerves, which are emanations or appendages of the brain, require a constant communication with that organ to support this faculty.

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The ſame obſervation alſo holds good with reſpect to the power of motion. The muſcles, it is true, are ſo conſtructed as to be peculiarly fitted for motion; but were their communication with the brain through the nerves cut off, their conſtruction would be of no avail. Phyſiologiſts, therefore have, I think, too haſtily concluded, that muſcular organs poſſeſs a *vis inſita*, or inherent power of motion, totally independent of the brain. A muſcle, by contracting after it hath been ſeparated from the body, ſeems, indeed, to favour ſuch a concluſion: but why may not the contraction happen merely from a *retention* of that motive principle which the muſcle derived from the body, whilſt it was connected with the brain? I cannot indeed avoid entertaining an opinion favourable to this idea; for the more I reflect on the different conditions of the body, when the brain is either afflicted with diſeaſe, diſturbed by paſſion, or is in a ſtate of health and tranquillity, the more am I induced to conſider that organ as the ſource of all motion, as well as ſenſe. I ſhall therefore offer the ſubſequent reaſons for the ſentiment I adopt:

1ſt. I conſider the brain as the ſource of motion, becauſe no organ, after its nerves are compreſſed or deſtroyed, continues to act as it did before. In either caſe the action of it becomes weaker, and in a very ſhort time it fails to be excited by the ſtrongeſt applications.

2dly. Becauſe the action of a muſcle may be produced by applying the exciting cauſe to the nerve *only*, which *leads* to it.

3dly. Becauſe when there is a diminution or loſs of motion, whether it be in a voluntary or involuntary organ, we find that it is proportionate to the compreſſion or injury the brain or nerves labour under. Hence, if the brain be *univerſally* compreſſed, or its power *wholly* deſtroyed, all motion ceaſes.

4thly. Becauſe the nervous matter is ſo cloſely interwoven with the muſcular fibre, that it cannot be ſeparated or even diſtinguiſhed from it. Every application therefore to a muſcle muſt neceſſarily affect the nervous matter. This being the caſe, we may, I think,

I think, rationally infer, that the nerves which enter the compoſition of a muſcle diſpoſe it to contract, ſince we know by experiment, that a ſtimulus applied to nerves at a diſtance from the organ with which they are connected, will excite motion in it.

5thly. Becauſe the brain ſeems to be the organ firſt endowed with life, that firſt evolves and arrives at full growth, earlier than any other part of the human machine. We may therefore, I think, be allowed to conſider it as the receptable of life, poſſeſſing at the ſame time, a power to tranſmit the *vital principle*, the efficient cauſe of motion, to the other organs of the body.

This opinion I am diſpoſed to conſider as founded on fact, although I can neither explain the *nature* of the *vital principle*, nor the manner in which the brain acts in the tranſmiſſion of it. It would ſeem, however, that according to the degree of excitement or increaſed action of the brain, the vigour of the whole ſyſtem is either proportionably augmented or diminiſhed. Health, therefore, may not only be interrupted, but life

itſelf be deſtroyed by either too weak or too ſtrong an action of that organ.

The exceſs of vigour occaſioned by too great an excitement of the brain, is, in general, only productive of diſeaſe when it is either partial, or confined to the involuntary organs. This happens in what is termed the ſynocha, or inflammatory fever.

The vigour of the heart is in that diſeaſe ſo increaſed as to diſturb the order of ſecretion and excretion, and by propelling the blood with too much violence, it hath ſometimes produced rupture in a part of the vaſcular ſyſtem. Hence hæmorrhages of various kinds often happen when the inflammatory diatheſis is preſent.

On the contrary; when the action or power of the brain is diminiſhed, or wholly deſtroyed, the body is either partially or univerſally deprived of that ſupply of *vital principle* which gives it motion, or preſerves its vigour. Hence debility, languor, palſey, or death enſues. It hath accordingly been remarked, that the cauſes of death are, in general,

neral, ſuch as act directly or indirectly on the brain. Of the firſt kind are thoſe which directly attack and deſtroy the vital principle, as lodged in the nervous ſyſtem, or deſtroy the organs immediately connected with it. Of the ſecond kind are thoſe which interrupt ſuch functions as are neceſſary to the circulation of the blood, and thereby neceſſary to the due continuance and ſupport of the vital principle.

From what has been ſaid we may infer, that in a perfect ſtate of health there is a *certain balance of ſtrength or vigour* maintained between the ſeveral organs of the body, by the peculiar operation of the Brain: whatever, therefore, deſtroys this balance, may be deemed a remote cauſe of diſeaſe.

As there are, I apprehend, few cauſes which more immediately affect the brain or nervous ſyſtem, than the ſeveral conditions of the mind, ſo there are but few which more *directly* interrupt or deſtroy that equilibrium of action and vigour which

are

are neceſſary to health. I am conſequently led to conſider thoſe effects which the mind produces on the body when it is occupied by thought, or under the influence of emotiou and paſſion.

CHAP.

CHAP. III.

Of Simple Thought, or Attention.

THAT application of the mind which is unattended by any ſenſible exertion of it, I conſider as conſtituting the leaſt, or moſt ſimple degree of thought. I therefore call ſuch a trivial engagement of the mental faculty, *Simple Thought*, as it ſerves only to amuſe, or keep the mind in a ſtate of tranquillity.

This ſimple degree of thought, or attention of the mind, is both natural and uſeful: I ſhall therefore attempt to point out its beneficial tendency on the healthy, and morbid body.

Since the human machine is continually expoſed to the action of powers we cannot avoid, and which are for the moſt part *ſtimulant* in their *firſt* operation, Nature ſeems

chiefly concerned in diminiſhing the *general ſenſibility* of the body, as the moſt obvious or only method to prevent too violent effects from them. It accordingly happens in the revolution of a few hours, that a degree of inſenſibility is regularly induced, conſtituting a ſtate of ſleep; by which the ſyſtem is relieved from the influence of cauſes, whoſe perpetual action would ſoon deſtroy it. Even whilſt we are awake it may, I think, be obſerved, that our ſenſibility is often diminiſhed. However numerous the means may be by which this is effected, I am inclined to believe that Simple Thought is one, not the leaſt conſiderable: for the *general ſenſibility* of the body appears to be leſſened in proportion to the degree of attention which occupies the mind; that is, by an attention to any thing, except the impreſſions actually made on the body. This I ſhall attempt to illuſtrate by a few familiar examples.

Among the variety of ſtimulating cauſes which affect the body, exerciſe is one of the ſtrongeſt; and the ſtronger any general ſtimulus is, the moving powers are the ſooner weakened by it. Hence the ultimate effects

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of exercise would perhaps sooner take place than they generally do, were they not counteracted by some engagement of the mind. I am led, therefore, to imagine that Simple Thought, or Attention, often prevents that degree of *fatigue* which might otherwise happen during even the common exercise of the body.——There are few persons, I believe, who cannot say, that they have been much less tired in walking with a friend or an agreeable companion, than by themselves; and it is not uncommon to notice on such occasions, that we have walked to a certain distance without being sensible of its length; or (in other words) of that weariness which we usually felt when *alone*. This diminution or prevention of fatigue seems to be induced by that attention which necessarily occupies the mind when we are engaged in conversation: for, if when we are *alone* the mind be *equally* engaged, as is sometimes the case whilst we are *musing* (as it is termed) or enjoying our own thoughts, or contemplating the prospect around us, the same effect takes place. It accordingly happens, that without a companion we sometimes walk to that distance which usually tires us, with-

out ſuffering the leaſt fatigue. This circumſtance may be ſaid to ariſe from an occaſional increaſe of bodily ſtrength. I apprehend, however, that if a man be in health, his ſtrength to-day and to-morrow will be entirely, or very nearly, the ſame; ſo that we may be allowed to conſider this variation in the effects of exerciſe as dependent on mental attention, which muſt ever vary according as the objects which ariſe are more or leſs engaging.

The ſports of the field, as they employ the mind, have certainly a tendency to obviate, or leſſen, in ſome meaſure fatigue in their purſuit. Hence a ſportſman will feel leſs tired under an equal exerciſe of the body, when he beats through a country that affords plenty of game, than over one which furniſhes but little. — With me, indeed, it is a queſtion, whether the laborious claſſes of mankind would be able to execute ſo much work as they commonly do, were not their minds at the ſame time engaged by ſimple Thought. The machine during this employment uſually ſings or converſes, and thereby amuſing

ſing his mind, he alleviates the burthen of the day. The peaſant whiſtling over his labour, often retires to reſt much leſs fatigued than a perſon who lounges through the day with a mind leſs occupied, and a body leſs employed. It is not uncommon therefore ſometimes to remark in an evening, that we feel ourſelves much fatigued, and to wonder at it, becauſe we had *done nothing the whole day!* In this caſe, the fatigue complained of ariſes from a too weak, or non-engagement of the mind.

By an attention of the mind, thoſe ſtimuli which affect the ſyſtem through the ſeveral organs of ſenſe, are prevented in ſome meaſure from over-acting or producing effects which might too ſoon exhauſt the energy of the brain, or nervous power. Hence, the too ſtrong impreſſions of light and ſound, and the too frequent ſolicitations of hunger and thirſt, and of the appetites in general, are in ſome meaſure obviated. I am therefore led to believe, that ſimple thought tends to preſerve the healthy exerciſe of the moving powers: for although it diminiſh ſenſibility to a certain extent, it

never ſo far depraves the nervous ſyſtem as to render it inſenſible to thoſe exciting cauſes which are requiſite to the well-being of the animal economy.

This degree of thought or attention of the mind, as it ſerves merely to amuſe, is often of conſiderable uſe in the cure and prevention of particular diſeaſes. Thoſe for example which are attended with convulſive or ſpaſmodic affections, may be often removed by it, and their recurrence frequently prevented. Dr. Whytt tells us, that he had often been cured of a ſlight hiccup by looking ſteadfaſtly for two or three minutes on the impreſſion upon a ſhilling, or any other coin; and that he knew a lady, who, though very liable to hyſteric fits, was never affected with them or with ſlighter complaints, when any of her children happened to be dangerouſly ill. Theſe are examples which unqueſtionably prove, that ſenſibility of body is diminiſhed by an attention of the Mind.

In conſequence of a diminution of ſenſibility by mental engagement, even pain

itſelf is rendered more tolerable. Many an Invalid forgets his pain, (as he expreſſes himſelf) whilſt he is amuſed by the company of his friend, or the converſation of thoſe who viſit him. From the ſame cauſe alſo, namely, *a full engagement* of the Mind, it is I apprehend, that Philoſophy has been found ſometimes to mitigate pain or uneaſineſs of body. Hence thoſe principles of virtue, ſuch as Fortitude, and the love of Glory, which were inculcated by the Philoſophers of former ages, being calculated *fully* to engage the Mind, may on ſome occaſions have prevented that acuteneſs of bodily feeling which might otherwiſe have prevailed. It accordingly not unfrequently happens, that a Soldier during the heat of battle, is wounded without being ſenſible of the circumſtance, until faintneſs through loſs of blood give him the alarm.*

* Non ſentiunt viri *fortes* in acie vulnera; vel ſentiunt, ſed mori malunt, quam tantillùm modò de dignitatis gradu dimoveri. Fulgentes gladios hoſtium videbant Decii, cùm in aciem eorum irruebant: his levabat omnem vulnerum metum *nobilitas* mortis et *gloria*.——Hæc ſunt *ſolatia*, hæc fomenta ſummorum dolorum. Cic. queſt. Tuſcul.

The

The nervous ſyſtem is ſometimes ſo irritable, that ſleep cannot be procured by opium or other medicines uſually employed for the purpoſe of inducing it: in ſuch caſes therefore we ſhould have recourſe to means adapted to engage, or amuſe the Mind.

The uniform ſucceſſion of ſounds, as the hum of bees, the murmur of a rivulet, the whiſtling of the wind, the gentle fall of a caſcade, the bleating of lambs, the cooing of doves, the ringing of bells at a diſtance, and the graver tones of muſic, as they invite our attention without producing any conſiderable emotion, contribute to induce ſleep.*

* Fortunate ſenex! hic inter flumina nota,
Et fortes ſacros, frigus captabis opacum.
Hinc tibi, quæ ſemper vicino ablimite ſepes,
Hyblæis apibus florem depaſta ſaliati,
Sæpe levi ſomnum ſuadebit inire ſuſurro.

VIRG. Eclog.

Labuntur altis interim rivis aquæ;
Quæruntur in ſylvis aves;
Fonteſque lymphis obſtrepunt manantibus,
Somnos quod invitet leves.

HOR. Epod.

The

The effect of theſe therefore point out to us the propriety of employing ſimilar means, when reſt is wanted by the ſick.

Boerhaave on ſome occaſions, in order to procure ſleep for his patient, directed water to be placed in a ſituation ſo as continually to drop on a braſs pan. Others have uſed the Æolian harp; and I have been told, that for the ſame purpoſe, in ſome parts of a neighbouring Iſland, nurſes are at this day employed to ſing to the ſick, or tell them ſome long ſtory in a monotony of voice. This indeed has ever been more or leſs the cuſtom of thoſe who have had the care of young children. Another method alſo hath been ſucceſsfully made uſe of to procure ſleep, namely, the enumeration of figures or the repetition of ſome heavy verſe. This can no otherwiſe produce ſleep than by engaging the Attention.

A confirmation of what hath been advanced will, perhaps, appear when we reflect, that the very *oppoſite effects* are produced by the Mind, when it is *wholly attentive* to the im-

impreſſions which are made on the Body. In this caſe, their force and the diſtinct perception of each are increaſed; hence thoſe impreſſions which would otherwiſe only create a trifling uneaſineſs, will, under ſuch a circumſtance, produce it in a conſiderable degree.

It is upon this principle of Attention to impreſſions made on the body, that the ſeveral organs of ſenſe are improved, as the eye and ear, &c.; the former in the accurate diſtinction of objects, and the latter of ſounds.

Hippocrates hath obſerved, that when two painful ſenſations ariſe, and each of them in a diſtinct part of the body, the one which is moſt violent takes from, or diminiſhes our perception of the other.

This is certainly effected by the ſuperior force with which the greater pain attracts the notice of the mind. From a ſimilar cauſe, I apprehend, impreſſions on the Mind ſometimes leſſen the effects of thoſe which are made on the body; for, except an impreſſion

preſſion made *directly* upon the former be ſtrong enough to engage its attention *more* than one made *immediately* on the latter, no ſuch conſequences will follow; we accordingly find, that if a perſon ſuffer *violent pain*, his Mind can never or very ſeldom be engaged ſo as to render his feeling leſs; becauſe the impreſſion on the part affected is much ſtronger than any we can *in general* make, by an *immediate* application to the Mind. In ſuch a caſe, therefore, the Mind, inſtead of being diverted from the impreſſion, is on the contrary, irreſiſtibly compelled to attend to it *only*. It has however ſometimes happened in perſons of *timid* minds, that the tooth-ach, a very common and ſevere pain, hath been removed by the ſight only of the Dentiſt's inſtruments. On this occaſion the Mind is *awefully* and conſequently *very cloſely* engaged.

The inferences which neceſſarily ariſe from what hath been ſaid, are in my apprehenſion ſufficient to direct our conduct both in the management of health and diſeaſe. They point out to us the propriety of *amuſing* the Mind when we are in poſſeſſion of

the higheſt health, or under the influence of particular diſeaſes, or in that convaleſcent ſtate which renders every impreſſion on the body, doubly important.

CHAP.

CHAP. IV.

Of Intention or Study.

HAVING in the former chapter treated of a paſſive kind or condition of Mind, I proceed under the preſent title to ſpeak of that which is of a more active nature, and which hath conſequently a more conſiderable influence on the animal œconomy. For the truth, however, of my obſervations on the preſent ſubject, I muſt chiefly appeal to thoſe who are acquainted with the taſks of literature and ſcience. I ſhall, therefore, under diſtinct heads, endeavour to point out the ſeveral changes which a laborious employment of the Mind may produce in the body.

1ſt. The firſt, and I apprehend the moſt apparent change, is, in its Senſibility.

Thoſe who have been engaged in literary purſuits will, I believe, eaſily recollect inci-

dents which have ariſen during Study, ſufficiently to convince them, that their Senſibility muſt have been at that time conſiderably diminiſhed: for example, it not unfrequently happens, that a ſtudious man continues in his room many hours in purſuing a train of thought, without knowing that his fire has gone out, or feeling the leaſt inconvenience from ſuch a circumſtance. At another time, his Mind not being ſo *fully* engaged in a ſimilar ſituation, he is very ſenſibly affected by the chilling power of cold. The ſenſes, indeed, are ſometimes ſo impaired by a cloſe and elaborate attention, that even conſiderable noiſes paſs unnoticed, and thoſe objects which we *ſeem* particularly to obſerve, make no impreſſion on us. This the eye *ſometimes* during ſtudy is directed to, and fixed on objects, which, to ſpeak in common language, we *do not* ſee, or to the impreſſions of which we are *totally* inſenſible. This wholly depends on the intenſity of our application; for as ſoon as that is diminiſhed, we become more ſenſible, and when the Mind withdraws from thoſe objects which ſo fully engaged

gaged it, our perception of every impreſſion is as diſtinct and perfect as uſual.

To what has been ſaid, it may be objected that even during Study our ſenſes are affected by very trivial cauſes, a ſmall noiſe a cooler air, or a ſtronger light than uſual being ſufficient to diſcompoſe us. This appears however to happen only, when the Mind is *imperfectly* engaged, which is generally, if not always the caſe, at our firſt ſetting down for the purpoſe of Study. Our ideas at this time are in general too fugitive, or at leaſt not ſufficiently aſſociated to acquire that power which is neceſſary to force the Mind to a ſteadfaſt application. Such an objection, therefore, does not, I conceive, invalidate the propoſition advanced.

By long and frequent Study the ſenſibility of thoſe organs which ſerve to the natural functions, becomes ſo impaired, that ſtimuli adapted to their proper or original ſtate of feeling, fail to produce the neceſſary and uſual effects. Hence the ſtomach during Study loſing ſome portion of its ſenſibility, is not ſo readily affected by the liquor

it ſecretes, ſo that our appetite does not *then* ſo often ariſe. Perſons in ſuch a ſituation are accordingly known to faſt many hours, without feeling the ſolicitations of hunger; at the ſame time alſo, a like failure of ſenſibility prevails through the inteſtines, ſo that a coſtive habit is induced.

The effects enumerated, therefore, of cloſe mental application, conjoined with a ſedentary life, give riſe to obſtructions in the abdominal viſcera, and form the baſis of thoſe diſorders to which men of letters are particularly liable.

2dly. When the Mind is employed on any work of Study, the *general ſenſibility* of the body is not only conſiderably diminiſhed, but the brain is ſo actuated, that the motion of the blood is quickened, and more than uſually determined to that organ.

The more increaſed motion of the blood may have no injurious tendency in a healthy perſon, or in one who is not prediſpoſed to particular diſeaſes. To thoſe however who are, or who actually labour under any diſ-

order in which the circulation is already too quick, eſpecially if it be attended with occaſional delirium, the leaſt degree of thought beyond what conſtitutes *ſimple attention*, may prove injurious. A prudential caution, therefore, is often neceſſary to be obſerved, in tranſacting any buſineſs with the ſick, which requires the exerciſe of much thought. But although the mere circumſtance of an accelerated circulation may not be of any great importance; yet, as intenſe thinking determines at the ſame time a conſiderable afflux of blood to the head, a *long occupation* of the Mind in Study ſhould be avoided by perſons who from their conſtitution, or time of life, are diſpoſed to apoplexy, or other affections of the brain. In this place I may, I think, venture to relate one inſtance of *temporary Apoplexy*, which ſeems to have been occaſioned by a cloſe application of the Mind. An old gentleman of my acquaintance, the late Archdeacon of Bath, whilſt intently engaged in the peruſal of a new publication, fell ſuddenly from his chair. His ſpectacles were broken by the fall, and cut his face ſo as to produce a conſiderable flow of blood. By this accident it

is

is probable that a *fatal Apoplexy* was prevented, the ſurcharged veſſels of the head being immediately relieved by the bleeding.

I have known more than one inſtance of perſons liable to epilepſy, who were generally ſeized with a fit if they read too long at a time, eſpecially if the ſubject were in the leaſt abſtruſe. One unhappy man of this deſcription I much pitied, as his chief amuſement aroſe from the newſpapers; he was very fond of politics, but could ſeldom read through a long Parliamentary debate without being affected by an epileptic paroxyſm, or obliged ſuddenly to throw aſide the paper he was reading, by ſome ſymptoms of its approach.

To the unmedical reader, I do not know how to illuſtrate my aſſertion, that a cloſe application of the Mind determines the blood to flow more particularly to the head, otherwiſe, than by directing him to obſerve the countenances of thoſe who play at cards for high ſtakes, or for ſuch as are of ſufficient importance to merit a full attention to the game they are upon. In one who has been

ſome

ſome time engaged in play, a greater glow of the face and fullneſs of the blood veſſels of the eyes may be perceived, than before he ſat down for that purpoſe. Hence on ſuch occaſions a complexion naturally pale will ſometimes aſſume a ruddy appearance. The effects of ſuch attention are very conſpicuous in perſons of a full and ſanguine habit; and theſe will be often ſenſible of this determination to the head, by the increaſed heat they feel in the face when the ſhort intervals of play permit the Mind to attend in ſome meaſure to the ſtate of the Body.

3dly. By a long and frequent employment of the Mind in Study, the general vigour of the Body is impaired.

The alteration or change in the ſtate of the brain induced by Study, cannot be aſcertained, nor ſatisfactorily explained upon any principle of theory; it may be therefore allowable to conjecture, that it is ſuch a change as retards, or prevents, that full tranſmiſſion of the vital principle to the ſeveral organs of the body which we deem

neceſſary to the ſtrength of the whole, and which I have already mentioned as dependent on a proper action of the brain.

A more than ordinary *accumulation* or *retention* of the vital principle in that organ is, perhaps, required under the arduous exerciſe of Thought; or this principle may be very conſiderably expended during that period, by the peculiar exertions of the brain. Be this as it may, it is certain that long and frequent ſtudy weakens the general ſyſtem independently of other concurring cauſes. Hence ſtudious perſons are often afflicted with tremors, which are moſt conſpicuous when they attempt to write, or do any thing that requires a ſteadineſs of hand; and as the action of the heart and arteries is leſs vigorouſly performed, they become alſo liable to various obſtructions, and to a diminution of that natural heat and perſpiration, which are eſſentially requiſite to the ſupport of health.

From theſe cauſes, the fluids accumulate, and from ſome interruption or weakneſs in the lymphatic ſyſtem, their more watery parts

parts are left in the cavities of the body, ſo as to occaſion dropſy, and finally death.

4thly. Laſtly. By long and frequent intention, the brain itſelf becomes impaired; hence the dimneſs of ſight, dullneſs of hearing, loſs of memory, fatuity, and palſy, are afflictions which have befallen many an indefatigable genius in this and in other countries.

Convaleſcents, therefore, and perſons of weakly habits, ſhould particularly avoid much Study, and if they ſtudy at all, ſhould often change their ſubject, as a mode of diminiſhing in ſome degree the fatigue which might otherwiſe enſue.*

* Exceſſus tamen cum varietate ſtudiorum tolerabilior eſt: et vehemens cogitationum in eandem rem intentio, non interrupta, rari ſunt, quibus non magnopere noceat. Etenim pars illa ſenſorii communis, quæ ſola tum in actione eſt, et in quam tota veluti mens omni ſua vi incumbit, violentiam patitur haud minorem, quam muſculi ſingulares fortiter diuque contracti. GAUB. Inſt. Patt.

But although long and frequent Study independently of other cauſes, very conſiderably tend to impair the vigour of the body, and induce thoſe diſeaſes to which literary men are particularly liable; yet the ſedentary life it impoſes muſt be conſidered, as in no ſmall degree contributary. Nothing, therefore, can tend to preſerve the health of ſtudious perſons ſo much, as an habitual or regular exerciſe of the body during the ſeveral intervals of Study; ſince it oppoſes the injurious tendency of their ſedentary hours, and by deranging the order of thought, prevents a too quick renewal of the ſtudious ſtate.

CHAP. V.

Of Hope.

HOPE is an emotion of the Mind, deſigned, as it would ſeem, for the ſupport of Man under the gloomy viciſſitudes of human deſtiny. It enables us not only fully to enjoy the good we are in poſſeſſion of, but to ſuſtain more eaſily the common evils of life by repreſenting to us the animating proſpect of better days.

——Hope prolongs our happier hour
Or deepeſt ſhades, that dimly lower
And blacken round our weary way,
Gilds with a gleam of diſtant day.

GRAY.

The animal œconomy, therefore, derives no inconſiderable benefit from the exhilarating influence of this emotion, as will appear

more clearly when its effects are contrasted with those which are produced by an opposite state of Mind.

By the influence of Hope on the nervous system, the action of the heart, so far as it depends on the energy of the brain, is in some measure assisted. Hence it contributes to invigorate the circulation, thereby maintaining that tension of the blood vessels which is necessary to support the general strength of the body: as it has this tendency, it may be justly deemed a preservative power, a prophylactic, which opposes in no small degree the attack of particular diseases. It has accordingly been remarked, that when the Minds of persons have been fortified by Hope, they either escape contagion from a prevailing epidemic, or are infected by it in a milder manner than those who give way to unfavourable apprehensions.

The utility of Hope, in the prevention and cure even of the plague, is attested by the writings of those who had sufficient opportunities of observing it. We should, says a late celebrated Professor, fortify as well as

poſſible the *Minds* of thoſe who are expoſed to the contagion of plague, by giving them a favourable idea of the power of preſervative means, by deſtroying the opinion of the incurable nature of the diſeaſe, and by preventing all thoſe objects which tend to deject the ſpirits, ſuch as funerals, paſſing bells, and the knowledge of the death of friends.

The ingenious and humane Howard is, perhaps, not far from the truth in ſuppoſing that the jail-fever depends in a great meaſure on the ſtate or condition of the Minds of thoſe who are expoſed to it. If it were aſked, ſays he, what is the cauſe of the jail-fever? it would in general be readily replied, *the want of freſh air and cleanlineſs.* But as I have found in a few priſons abroad, cells and dungeons as offenſive and dirty as any I have obſerved in this country, where, however, this diſtemper was unknown, I am obliged to look out for ſome additional cauſe of its production. I am of opinion that the ſudden change of diet and lodging ſo affects the *ſpirits* of new convicts, that the general cauſes of putrid fevers exert an imme-

immediate effect upon them. Hence it is common to see them sicken and die in a short time, with very little apparent illness.

To the above opinion, it may perhaps be opposed, that the change of diet and lodging would *alone* be sufficient, by weakening the system, to dispose it to receive infection. It is however certain, that as depression of Mind tends very considerably to diminish vigour of body, the latter is in consequence disposed the more readily to be affected by putrid effluvia. I am inclined, therefore, to believe, that were an accurate observation made, those criminals who are of the most obdurate dispositions of Mind would be found the least susceptible of contagion.

But the salutary influence of Hope will, perhaps, be more obvious, when we consider its effects on the *morbid* body. In those disorders which are attended with debility and languor, every humane and attentive physician must have noticed the exhilirating power of this emotion. Hope, says the late

late Dr. Fothergill, is of vaſt moment in the cure of many diſeaſes; and it is not perhaps inconſiſtent with the duty we owe to our patients to promote it, whilſt we ourſelves retain a hope of their recovery.

Here it may not be amiſs to oppoſe that cenſure which is occaſionally caſt on the phyſician who endeavours to cheriſh Hope in his patient to the laſt. Such conduct has been deemed improper in a religious view, but how far it is reaſonable to expect that the repentance of a paſt life will avail at ſo late a period, it is not for me to give an opinion. I am, however, convinced that by depriving the Mind of Hope, we may *haſten* the exit of the ſick, and render their laſt moments truly miſerable: for the awe of dying is ſufficiently diſtreſſing to the Mind, and depreſſive to the body, whether men are well, or ill, prepared for the event. A more rational plea for informing a patient of his danger might be given by thoſe of his family or connections, whoſe protection and welfare, after his deceaſe, depend on the condition in which he leaves

his temporal concerns. If, therefore, it ſhould be intimated to a phyſician, that the affairs of his patient are unſettled, and he ſhould be ſolicited to acquaint him of the dangerous tendency of his diſorder, he ought, perhaps, to acquieſce; but even in this caſe he ſhould avoid it, until he had tried every other method to induce him to adjuſt what he had omitted: for it ſometimes happens, that the moſt experienced and ſagacious phyſician is miſtaken in his prognoſtic, and perſons recover from the brink of the grave, who, probably, would not have eſcaped, had they been informed of their real danger. To proceed:

Sanctorius obſerves, that nothing occaſions a more liberal perſpiration than conſolation of mind; and, among other emotions, Boerhaave mentions Hope, as acting a curative part in the languid ſtages of fever.* If, indeed, the proximate cauſe of a continued fever be in part owing to a conſtric-

* Lætitia moderata, *Spes* futuræ ſanationis, deſiderium præcipua hic ſunt et tutiſſima; cum motum humorum leniter augeant.

Van Swiet. Comment. in Boer.

tion

tion of the extreme veſſels of the body, (as is the modern doctrine) the conſolatory power of Hope may be uſeful, by contributing to reſtore that energy of the Brain which is neceſſary to overcome it.

It is well known that, in the rude times of medical ſcience, the cure of diſorders was often attempted by amulets, incantations or charms, to which cuſtom Horace, in one of his Epiſtles, ſeems to allude, on ſubjects of mental diſquietude:

Sunt verba et voces, quibus hunc lenire dolorem
Poſſis, et magnam morbi deponere partem.

I can indeed readily imagine, that as the minds of the ſick were impreſſed with a firm hope or confidence in ſuch remedies, a ſalutary change in the animal economy was ſometimes effected. If, therefore, in the preſent enlightened age we find perſons who believe in the efficacy of charms, or modes of cure, equally ridiculous, it will, I think, be proper to make uſe of ſuch remedies; being of opinion that any attempt to remove the credulity of perſons ſo infa-

 tuated,

tuated, would be as unphiloſophical, as to recommend the obſervance of ſimilar means to thoſe who have no faith in them: at the ſame time, however, it will be highly neceſſary to adminiſter ſuch medicines as are moſt likely to effect a cure, taking care that the patient conſider them merely as *auxiliaries*, otherwiſe *real remedies* may be wholly rejected: for when the human Mind is infatuated by any particular opinion, it will never adopt maxims which ſuperſede, however it may be diſpoſed to acquieſce in ſuch as tend to confirm it.

Hope ought, perhaps, to be more eſpecially encouraged in perſons who labour under chronic diſeaſes, as it will induce them ſtrenuouſly to purſue the neceſſary means of cure, which, to be effectual, require to be long continued. Although in ſuch caſes we may have only a very weak expectation of being able to reſtore health, we ſhould endeavour by every method to prolong life, even if it be attended with much ſuffering: for as the human body progreſſively undergoes ſome change, the diſorders it labours under at one period, often ceaſe at another.

Hence

Hence thoſe which accompany childhood may retire at puberty, and ſuch as occur in youth ceaſe at middle age, and thoſe of middle age give way in more advanced life.

Notwithſtanding many diſeaſes of the body conſiderably depreſs the Mind, there are but few in which a man totally throws aſide his Hope. Some inſtances, indeed, occur where this benign emotion ſeems to increaſe with the exigencies of nature. In the extreme ſtage of conſumption, for example, as well as through the whole progreſs of that diſorder, the ſick are apt to entertain the moſt favourable opinion of their complaints; they are conſequently cheerful, and often pleaſe themſelves by converſing on the different amuſements they expect ſoon to partake of, or on the return of ſeaſons which they think will reſtore them to perfect health. If diſappointed, they very readily ſuggeſt reaſons for it, and immediately diſcover other pleaſing views equally deluſive. I particularly remember a conſumptive patient who, with-

in a few hours of his death, detained me a conſiderable time, in deſcribing a certain ſpot of land, the nature of its culture, &c. &c. and in anticipating the enjoyment of a ride to it the next day. He was then perfectly collected, and in ſpirits, but before the ſucceeding noon he died.

If it be true, as from obſervation I have no doubt in believing, that conſolation of Mind, or the Hope of relief, contributes to the cure of diſeaſes, and the prolongation of life, we may, I apprehend, conclude, that ſick perſons reap no inconſiderable benefit when they meet a friend in their phyſician; as this union tends, in the higheſt degree, to excite that Hope and confidence which are, perhaps, in no ſmall degree requiſite to the ſucceſsful adminiſtration of medicine. Hence Pechlin, "Quotidianum eſt, niſi concepto ante gau-"dio et fiduciâ de medico ægrotantis "animus erigatur, lentas eſſe remediorum "vires."

Hope,

Hope, when conſidered as a remedy, appears, in one reſpect at leaſt, to have the advantage of every other emotion; it acts without violence, and may of courſe, be ſafely encouraged in every ſpecies of diſeaſe.

CHAP.

CHAP. VI.

Of Joy.

THIS emotion, if it be occaſioned by any ſudden or unexpected cauſe, may not only produce very conſiderable, but even fatal changes in the animal economy. When ſuch happen, the vital principle is either at *once expelled*, as it were, by an over excitement of the brain, in conſequence of ſome great injury done to the blood-veſſel ſyſtem, the welfare of which is abſolutely neceſſary to ſupport the tone of the brain, and conſequently the continuance of life in the human body.*

* Organa quæ ſanguinem movent tantum cum cerebro commercium habent, et ſanguinis motus, ad excitandum, ſuiſque muneribus aptandum cerebrum adeo neceſſarius eſt, ut hæ binæ functiones ſubſidium ferant et petant viciſſim neque altera ſine alterius opĕ perfici queat.

Grægor. Conſpect. Med. th.

That

That the former circumſtance ſometimes occurs, it is very probable, ſince in perſons cut off by the violent operation of this emotion, no marks of organic injury have been diſcovered on diſſection: but that the latter ſhould often happen, it is more likely, from the phænomena which take place in the paroxyſm of exceſſive Joy. In this, the action of the brain on the muſcular fibres of the heart is ſo increaſed, that the contraction of the latter is performed with more than uſual force: hence the blood is not only propelled with increaſed violence, but the return of it from the auricle is at the ſame time retarded by the ſpaſtic ſtate of the ventricle. The countenance accordingly appears red and turgid, a ſenſe of ſtricture is felt around the præcordia, and reſpiration is ſhort and hurried. This contraction of the ventricle being followed by a proportional relaxation, the tenſion of the veſſels of the head is removed, ſo that paleneſs and ſyncope often ſucceed.

On the ſudden attack of Joy, therefore, ſhould the texture of the heart or its contiguous veſſels, or thoſe of the brain, be de-

ſicate, a rupture in either may happen. But the extinction of life is not ſo dreadful an effect of ſudden or violent Joy, as that perverſion of intellect which conſtitutes inſanity, and that ſtate of annihilation termed fatuity, which ſometimes ſucceed its operation. When theſe happen, ſome important change takes place in the brain, of what nature we know not.

On the other hand, when this emotion ſprings from anticipation, that is, when it ariſes from circumſtances which firſt produce Hope, or an expectation of future good, it is not only exempt from every injurious tendency, but productive of the moſt uſeful and ſalutary purpoſes in the animal economy. In ſuch a caſe, the ſyſtem is as it were prepared by a *gradual excitement* of the brain, to ſuſtain the increaſed action which, on this occaſion, takes place in the ſeveral moving organs of the body.

Whenever, therefore, Joy is excited by the gradual operation of its cauſe, the circulation is invigorated ſo as to produce the fulleſt tenſion of the vaſcular ſyſtm, on which

which the general ſtrength of the body in a great meaſure depends. Hence, under ſuch a ſtate of Mind, the various excretions will be completely performed, the appetite and digeſtive faculty preſerved in full vigor, * and viſceral obſtructions prevented.

Thoſe, accordingly, who paſs cheerfully through life, have, in general, the moſt healthy appearance: for by the invigorated action of the heart, the extreme veſſels being completely filled, the countenance receives that glow and animation, which are ſo characteriſtic of good health. A joyous ſtate of Mind, therefore, by thus contributing to ſupport the general vigor of the body, may tend not only to preſerve it from the attack of particular diſeaſes, but alſo to prolong life.

A late writer, in his comparative view of the ſtate and faculties of man, &c. obſerves, that the gentlemen of France, in all periods of life, even in the moſt advanced

* Videmus eos qui animo læto et hilari ſunt, cibum facilius et celerius concoquere.

Sennertus de viribus imag.

age, never aſſociate with one another, but ſpend all the hours they can ſpare from buſineſs, or ſtudy, with the ladies, with the young, the gay, and the happy; and that they live longer, and what is of much greater conſequence, live more happily, and enjoy their faculties of body and mind more entire in old age, than any people in Europe.

As exceſſive or ſudden Joy is ſometimes injurious even to thoſe who are in health, the utmoſt circumſpection ſhould be obſerved in communicating to the *ſick*, any intelligence which may excite this emotion. The pleaſing ſcene muſt be gradually unveiled, and every faſcinating circumſtance cautiouſly made known: for it ſeems to be an eſtabliſhed law of nature, that every change in the human body compatible with ſafety, ſhould *in general* be effected by a *gradual* though powerful operation.

When this caution is obſerved, Joy may be of no inconſiderable uſe in the cure of many diſeaſes. In all chronic caſes, for example, eſpecially in thoſe which ariſe from ob-

obſtructions in the extreme veſſels, or in thoſe parts whoſe organization is delicate as the glands; and in fevers alſo, when the action of the heart is too languid, it may be of advantage to employ thoſe means which produce cheerfulneſs of thought.* Even in the gout, eſpecially in the atonic ſpecies of that diſeaſe, where the ſyſtem is too languid to excite an inflammation on any of the extremities; circumſtances which exhilarate the Mind, have been found ſerviceable. In fits of regular gout, indeed, cheerfulneſs of thought is of no ſmall uſe, in enabling nature either to throw it off, or ſupport it, with leſs injury to the conſtitution. In arthridite, ſays Pechlez, ſemper lætior animus et patientia inſtructus plurimum prodeſſe et in partem ſanationis venire ſolet, et reperti ſunt, qui ubi alia non profuerant, remiſſo animo aut lætitiâ perfuſo valetudinem recipêre. In diſeaſes of the ſpaſmodic kind, or ſuch as occur perio-

* Spes, Lætitia, perſpirationem promovent, pulſum adcelerant, ſanguinis itinera liberant, adpetitum intendunt, morbos ſanabiles reddunt.

Haller. de ſens. intern.

dically,

dically, this emotion alſo has been found uſeful.

Under the reſtrictions, therefore, above-mentioned, Joy may be employed as a remedy on all occaſions, except when a diſeaſe be attended by very violent inflammation, an affection of the brain, or particular hæmorrhagies, as bleeding at the lungs, &c. &c. in which latter caſes a very trivial impreſſion on the Mind hath been ſometimes productive of alarming conſequences.

CHAP.

CHAP. VII.

Of Anger.

OF all the exciting paſſions, this appears to affect the body moſt conſiderably. The ſeveral circumſtances which attend an excitement of the brain by the operation of *exceſſive Joy*, are greatly increaſed during the paroxyſm of Anger. Thoſe changes in the ſyſtem, therefore, which we have already obſerved, as likely to take place under the operation of the former, will with more certainty ſupervene the action of the latter. The countenance is not only more turgid, but the ſuffuſion much deeper, approaching to purple, the eyes at the ſame time appear ready to ſtart from their orbits, and the reſpiration extremely hurried. The circulation is ſo much increaſed by it, that from ſeveral organs of the body, very profuſe hæmorrhagies have been occaſioned, ſuch as bleedings from the noſe, ears, lungs, anus, and uterus. Theſe effects of Anger

are,

are, indeed, generally induced on perſons who are conſtitutionally diſpoſed to ſuch diſorders, but more eſpecially on thoſe who have been once afflicted with them. By the violent operation of this paſſion, however, more important effects may be produced, ſuch as palſy, apoplexy, and ſudden death. Theſe may happen in perſons of every age, but more particularly in thoſe who are of a full and ſanguine habit, or who are advanced in life.

The paſſion of Anger has ſo great an influence over the organs of reſpiration, that it ſeldom fails to induce an aſthmatic paroxyſm on thoſe who are prediſpoſed to, or have already ſuffered from, affections in breathing. Its power alſo over the biliary ſecretion is ſo conſiderable, that its operation is often ſucceeded by very profuſe evacuations of bile. This latter effect is indeed ſo common, in ſome conſtitutions, that a ſuperabundance, or an ill condition of the bile, hath been conſidered as the cauſe or promoter of the paſſion we now treat of. Hence the terms *paſſionate* and *choleric* are ſynonymous, as implying iraſcibility.

Put him to *choler* ſtraight: he hath been uſed
Ever to conquer, and to have his worth
Of contradiction: being once chaf'd, he cannot
Be rein'd again to temperance;———

SHAKESPEAR.

Anger is not only capable of increaſing the ſecretions of particular organs, but of producing alſo *ſome change* in the fluids ſecreted. In the milk, for example, ſuch a change may be occaſioned, as to render it pernicious to infants, or at leaſt ſufficiently to deſtroy its nutritive quality. On this account, therefore, it may not be improper to obſerve, that perſons who employ nurſes for their children, ought not merely to make choice of thoſe who poſſeſs an healthy and vigorous ſtate of body, but ſuch whoſe minds at the ſame time are leaſt liable to be diſturbed by the influence of paſſion. For although we do not ſuppoſe, as ſome have, that an infant can imbibe the *virtues* or *diſpoſition* of the perſon who ſuckles it, yet we doubt not the nutritious property of the milk may be deſtroyed by the operation of Anger, or any violent or exceſſive emotion. Hence the child will be deprived of proper nutriment, and become in conſequence

weak and ſickly. Whilſt, then, this reflection conveys a proper leſſon to mothers, whoſe delicate conſtitutions oblige them to commit the office of ſuckling to hirelings, it affords an uſeful hint to *all who give ſuck*, of the neceſſity and duty they are under to preſerve a well regulated *temper*, as well as conduct.

From what has been ſaid of the effects produced on the ſanguiferous ſyſtem in general, and on peculiar organs of the body by the force of Anger, it appears highly proper that females particularly, and more eſpecially thoſe who are breeding, reſiſt every circumſtance which tends to excite it; ſince not only uterine hœmorrhages, but fatal miſcarriages, may ſucceed its operation.

Having already mentioned, that profuſe evacuations of bile are ſometimes occaſioned by this paſſion, it may be unneceſſary to obſerve, that perſons who have been afflicted with cholera morbus, ſhould carefully avoid every incentive to Anger. It will, however, be proper to recommend this caution

caution to thoſe who have been afflicted with jaundice, eſpecially if it have ariſen from gall-ſtones. Theſe concretions, it is well known, may remain in the gall bladder many years, or during the whole life of a perſon, without occaſioning jaundice; ſhould any cauſe, however, change their poſition ſo as to obſtruct the common channel of the bile into the inteſtines, this diſeaſe will be produced. The cauſes which are moſt likely to occaſion ſuch an effect, are thoſe which promote exertions of body; hence Anger, as it conſiderably agitates the whole frame, hath ſometimes induced jaundice.

Notwithſtanding the pernicious tendency of this paſſion in general, its operation having been thought uſeful in a few inſtances, it hath been recommended as a remedy: in caſes where the power of voluntary motion has been for ſome time ſuſpended, or greatly diminiſhed, it hath occaſioned at leaſt a temporary renovation. We have it recorded, for example, of one afflicted with palſy three years, who became ſo incenſed on hearing the enemy was at hand, that he immediately leaped from his bed, and joined

his fellow citizens. I myſelf knew a paralytic of a very iraſcible temper, who, notwithſtanding he was obliged to ſupport himſelf by a crutch, and his ſpeech was much impaired by the diſeaſe, would, when rouſed by Anger, ſpring from his chair without aſſiſtance, and exert his limbs and voice for the time, as well to appearance as a perſon in health. I might here, perhaps, with equal propriety, mention another inſtance of the force of Anger which has come to my knowledge, in the caſe of a perſon who is now living—A gentleman, who has a very great heſitation in his ſpeech, whenever any circumſtance excites his Anger or reſentment, he articulates rapidly and perfectly.

By the operation of this paſſion, fits of the gout are ſaid to have been ſometimes removed; they have, however, I apprehend, been oftener brought on, and rendered more ſevere by it.

Intermittent fevers alſo, or agues as they are commonly called, of a very obſtinate nature, are ſaid to have been removed by the power

power of Anger. If, indeed, juſt before the acceſſion of the febrile paroxyſm, we could excite an high degree of this paſſion, it might perhaps ſhorten the duration of the cold ſtage, and by inducing the hot and ſweating ſtages, occaſion a ſolution of the diſeaſe.

The ancients ſeem to have conſidered Anger as a remedy on the ſame principle they ſuppoſed a fever to be ſalutary; viz. by cauſing a concoction or reſolution of viſcid humours, or by diſperſing on the ſurface of the body thoſe noxious matters which it had imbibed: hence it hath been imagined, that the employment of Anger would be *uſeful*, by enabling nature to expel the matter of ſmall-pox, meaſles, eryſipelas, and other eruptive diſeaſes, from the internal and vital organs of the body. Experience, however, has taught us, that in thoſe diſorders, as they occur in this country, ſuch treatment would be highly injurious—placidity and calmneſs of Mind being almoſt the firſt requiſite to their happy termination.

Since

Since all the examples hitherto recorded of the efficacy of Anger as a remedy, do not counterbalance the injurious tendency of it, we are, I think, by no means authorized to employ it: beſides, it is extremely uncertain, that the ſalutary effects enumerated would be produced by its operation; and if they were,—their permanence would in general be but ſhort. In moſt caſes, the diſeaſes ſo ſuddenly removed, return after the paſſion hath ſubſided, attended oftentimes by a greater debility than before. This was always the conſequence of Anger in the paralytic I have mentioned.

Hippocrates, who has been quoted by modern writers as an authority for employing this paſſion in the removal of diſeaſes, gives us, I think, a ſufficient *caution*, when he ſays, that it is a remedy for perſons of *cold conſtitutions*. In thoſe, indeed, I apprehend its operation would be perfectly ſafe; but as their nervous ſyſtem is not diſpoſed to be much affected by paſſions of any kind, I fear we ſhould loſe this remedy, from our inablility to excite it in a ſufficient degree.

I muſt therefore conclude, that the employment of Anger in the cure of diſeaſes will be either hazardous, or uſeleſs.

CHAP.

CHAP. VIII.

Of Fear.

THIS paſſion of the Mind is for the moſt part injurious to the animal œconomy, and the force of its impreſſions differ, according to the mode by which it is excited.

When the cauſes of Fear *gradually* ariſe, the Mind having time to reflect, their operation is weakened, and timidity only is produced: but when thoſe cauſes are *ſuddenly* preſented, and eſpecially, if they have a reference to *immediate perſonal ſafety*, the Mind is uſually actuated by terror. I ſhall, therefore, treat of the preſent ſubject under two heads—Timidity and Terror, confining my obſervations chiefly to the latter, as this degree of Fear hath occaſionally been employed in the cure of particular diſeaſes.

1ſt. Timidity. Although the human Mind, as hath already been obſerved, be diſpoſed to cheriſh hope, yet Fearfulneſs alſo is a propenſity of nature, which ſometimes interpoſes, ſo as either to take from our preſent enjoyments, or prevent our future, by repreſſing thoſe exertions which are neceſſary to attainment. In ſome perſons this propenſity is unhappily ſo prevalent, that occurrences apparently of little or no importance are ſufficient to derange the healthy operations of the body; hence they become diſordered by cauſes which make no impreſſion on others, and are more conſiderably affected by thoſe, to which all are liable. In conſequence, therefore, of this diſpoſition of Mind, not only morbid cauſes with more certainty take effect, but diſeaſes themſelves are rendered dangerous. The truth of this latter poſition, experience has more than once confirmed in patients who, on the attack of fever, entertained the moſt fearful apprehenſions of danger. In ſuch, when that Timidity could neither be removed, nor diminiſhed, the diſeaſe hath terminated fatally, although in the firſt ſtages of

it no ſymptoms appeared, which could alarm.

I conſider it, therefore, a very unfavourable circumſtance, when a patient labouring under fever, or any other acute diſeaſe, entertains a ſtrong apprehenſion of death: on theſe occaſions, not only the uſual remedies muſt be employed, but the ſtrongeſt aſſurances of ſafety.

It would be ſuperfluous to extract from the works of medical writers, thoſe teſtimonies which might confirm what I have advanced, ſince every practitioner of experience and obſervation muſt, I apprehend, be convinced of its truth. I cannot, however, refrain from mentioning a caſe, which, in the early part of my ſtudies, very forcibly ſtruck me, as an inſtance of mental influence on the body. A man about forty years of age, of an athletic make, and enjoying good general health, was taken into Guy's Hoſpital for a ſwelling in the middle of his left leg, near the tibia, which had come gradually on, and at length prevented his following buſineſs. He could not account

count for his complaint, but ſuppoſed that it muſt have ariſen from ſome exertion in his occupation, which, I think, was that of a porter or coal-heaver. On examination, the ſwelling was judged to proceed from an aneuriſm, and after ſome little time the operation for that diſeaſe was performed: the bone, however, being found carious, and ligatures on the veſſels uſeleſs, it was propoſed to amputate immediately above the knee, to which the man readily conſented—obſerving at the ſame time, that he feared he ſhould die, whether the limb were removed, or not. During the operation there was no uncommon effuſion of blood; he was put to bed, ſlept well; his pulſe on the next day was good, the heat of his body not much increaſed, and every favourable ſymptom appeared. He was of courſe told, that he would do well; to this he ſhook his head; expreſſed much thankfulneſs for the care that had been taken of him, and concluded by ſaying, that he was certain he ſhould die. Every favourable circumſtance of body appeared to continue for ſeveral days; he readily took the medicines preſcribed, and plentifully of nouriſhment; the diſcharge from the thigh was moderate:

but the ſame apprehenſion of death continued, and he gradually ſunk away.

The paſſion of Fear, taken in the general ſenſe, as comprehending both timidity and terror, ſeems to injure health by primarily weakening the energy of the brain; hence a debility of the body is induced, which gives a prediſpoſition to many diſeaſes, and to none more readily than to thoſe of an epidemic * and contagious nature. It hath accordingly been remarked by ancient and modern writers, who were witneſſes to the ravages of plague, that perſons awed by fear or dread of the diſeaſe, were the firſt who received the contagion, and fell victims to it. This effect was indeed ſo obvious, that the occurrence of Fear hath been conſidered as one of the moſt unpropitious omens in perſons expoſed to, or affected by the contagion. Such a tendency of Fear, therefore, could not eſcape the notice of a philoſopher and a poet, who in deſcribing the plague at Athens, ſpeaks of it very pathetically, in the following lines:

* In morbis epidemicis cos cum primis offici videmus quos *metus* malè habebat. Pechlin. obſervat.

Illud

Illud in his rebus miſerandum, et magnopere unum
Ærumnabile erat, quod ubi ſe quiſque videbat
Implicitum morbo, morti damnatus ut eſſet,
Deficiens animo, mæſto cum corde jacebat
Funera reſpectans, animam et mittebat ibidem.
Lucretius.

When epidemic or contagious diſorders prevail in this country, it is generally found, that thoſe whoſe minds are depreſſed by the Fear of them, ſeldom eſcape their attack. The diſeaſe of the ſmall pox may be cited as an inſtance; perſons arrived at the age of puberty, who have eſcaped it, are apt to entertain the moſt depreſſive apprehenſions of infection. Hence it has happened, that ſuch accidentally entering an houſe where one lay ill of ſmall pox, have immediately ſickened, on being informed of the circumſtance; although they had oftentimes, without knowing it, been expoſed to the ſame contagion. When this occurs, the diſeaſe is generally of the confluent kind, and uſually terminates fatally.

2dly. Terror. As this term implies only an extreme or ſuperlative degree of Fear, we naturally infer, that as Timidity weakens,

or diminiſhes the action of the brain; Terror muſt neceſſarily produce a ſimilar, though greater effect. This, however, it would *ſeem*, is not always the caſe; for notwithſtanding the more uſual and final effects of Terror are debility and languor, yet it ſometimes happens that the oppoſite take place, when the Mind *appears* to be under its influence. I am lead, therefore, to conſider the more common operations of Terror, before I ſpeak of thoſe which are but rare, and which, perhaps, happen only in peculiar conſtitutions.

On the firſt impulſe of Terror, the heart ſeems to undergo a momentary ſuſpenſion of its action, to which ſucceeds palpitation, and an irregular and hurried reſpiration. Theſe effects are accompanied by a trembling and coldneſs of the body, paleneſs of the face, heſitation, or a total loſs of the power of ſpeech, and oftentimes by an effuſion of ſweat.

— Ubi vehementi magis eſt percuſſa metu mens,
Conſentire animam totam per membra videmus;
Sudores itaque, et pallorem exiſtere toto

Cor-

Corpore, et infringi linguam, vocemque aboriri,
Caligare oculos, ſonere aures, ſuccidere artus.
Lucretius.

I was once preſent during a very powerful operation of Terror. A gentleman, having diſmiſſed a ſervant of an implacable diſpoſition, was alarmed in the middle of the night by an attempt on his houſe. His wife, who had been always apprehenſive of the villainous principles of this ſervant, was ſo terrified, that ſhe ſtarted from bed, and, without ſpeaking, laid hold of the curtain for ſupport, being ſeized with a ſhivering the moſt violent I had ever ſeen. Her appearance was lifeleſs, her face and extremities cold and pale, and ſcarcely any pulſe could be felt. Theſe circumſtances continued for ſome time, after ſhe had been placed in bed, and the ſame effects enſued as uſually occur in the paroxyſm of an intermittent fever. A very conſiderable degree of heat ſucceeded the cold fit, and laſted for ſome hours, attended by reſtleſsneſs, until a ſweat aroſe; ſoon after which ſhe ſlept, and awoke in a ſtate of calmneſs; but under a debility,

of

of which ſhe did not recover for many days.

The natural functions are ſometimes ſo influenced by the power of Terror, that vomitings, diarrhœa, and a profuſe diſcharge of urine, have been occaſioned by it. Theſe effects happen, not unfrequently, in armies and navies to recruits, or men inexperienced in the ſervice, when the proſpect of immediate action preſents.

Similar operations are produced by Terror, even on the brute creation, and are noticed particularly in dogs, when they ſee the impending whip.

A circumſtance has lately occurred, which, perhaps, not only ſhews the ſtrong influence of Fear on the urinary organs, but alſo on the abſorbent ſyſtem. A perſon about fifty-five years of age, who had been ill nearly two years, requeſted my opinion on the nature of her diſorder. I found it to be an aſcites, or dropſy of the belly, and as the general ſtate of the body appeared healthy, I gave my opinion, and at the ſame time

time my ſolicitations for her conſent to the operation of tapping; after which ſhe might expect advantage from medicines. This patient, who entertained very dreadful apprehenſions of the operation, conſented to my propoſal, with a reſolution not often met with. On the next day Mr. Atwood, an eminent ſurgeon at Bath, went with me to know if ſhe continued in the ſame reſolution, and to appoint a day for the ſame. She was very glad to ſee us, being in high ſpirits, as ſhe had made, ſoon after I left her the day before, and during the night, no inconſiderable quantity of pale urine; from which circumſtance ſhe ſuppoſed that her diſorder would be removed without our aſſiſtance. The diſtance of two or three days, however, was appointed for the operation, as I conſidered the diſcharge of urine produced *merely* by the influence of Fear. Upon any other ſuppoſition, I think, it cannot be accounted for, ſince in the courſe of twenty-four hours not more than a large tea-cupful of water had ſeldom been evacuated for many weeks, and no medicine whatever had been taken ſeveral days previous to my viſit. The reſult of this caſe can

be of no conſequence to the ſubject we are upon, and I have introduced the circumſtance only to ſhew the power of Fear. It may not, however, be amiſs to ſay, that two gallons and five pints of water were drawn off by tapping, and that the patient, at this time, viz. three months from the operation, enjoys better health than for ſome years before. This, indeed, I think neceſſary to mention, as an encouragement to thoſe who may labour under the ſame malady.

Having thus much advanced on the general propoſition, that debility is induced by Terror, I proceed to conſider the oppoſite effects which are ſaid to be occaſioned by it.

It hath ſometimes happened that perſons whoſe lives or property were in imminent danger, have ſhewn moſt ſurpriſing exertions, as in alarms of fire, by burſting doors, or carrying heavy pieces of furniture, which their common ſtrength could never accompliſh. Such inſtances have, there-

fore, been adduced, as examples of the invigorating power of Terror.

Thoſe exertions, however, I cannot ſuppoſe to ariſe from the *immediate* effect of Terror; I ſhall conſequently attempt to explain, why debility in ſome, and ſtrength in others, are *apparently* occaſioned by it.

There is certainly a diverſity in the mental, as well as in the corporeal conſtitution; for the impreſſion of an idea made with equal, or even *leſs* force on the Mind of one perſon, than on that of another, may be retained longer by the former, than by the latter, and thereby retard, or prevent the occurrence of a new one. Hence the idea of danger, which excites Terror, ſo forcibly ſeizes the minds of many, as to prevent the intruſion of an idea of ſafety; ſo that the *deſire of eſcaping* is either totally ſuppreſſed, or conſiderably weakened: ſuch perſons, therefore, neceſſarily ſink under the operation of Fear.

On the contrary, an idea of danger, though ſufficient to produce the utmoſt

alarm, may, in ſome minds, ſubſiſt only for a moment, giving way to the hope of ſafety, whereby *the ſtrongeſt deſire to eſcape* will be excited, and conſequently thoſe corporeal exertions occaſioned, which *ſeem* to ariſe from the immediate influence of Terror. I am lead, therefore, to imagine that the increaſe of ſtrength obſerved ſometimes to ſupervene its operation, is produced in moſt caſes by a *ſtrong deſire* to eſcape the evil which impends. It is in this way, I apprehend, diſeaſes of debility are removed *apparently* by Terror: for the paſſion of deſire, whatever may be its object, is moſt certainly a very powerful ſtimulant and tonic.

The real operation of Fear, therefore, taken in the general ſenſe already mentioned, I conſider as ſedative and depreſſing; from which alone we may account for the intruſion of thoſe diſorders that are known to ſucceed it.

Notwithſtanding the many examples of the injurious tendency of Fear, it has more than any other affection been recommended

as

as a remedy in particular diſeaſes. Before the uſe of bark it was employed in the cure of intermittent fevers, by means of thoſe devices which are moſt likely to excite it; as by hanging toads round the neck, or expoſing the patient to other objects of dread, which, though perhaps harmleſs in themſelves, were deemed highly pernicious. The cure of epilepſy alſo has been attempted by the excitement of Fear, and hath been particularly noticed as a remedy in preventing the return of epileptic paroxyſms; a memorable example of its effect having occurred in the Orphan-houſe at Harlem, under the eye of the celebrated Boerhaave. As the circumſtance alluded to, is, perhaps, unknown to ſome who may peruſe this Eſſay, the medical reader will overlook the inſertion of it.

A child in the Orphan-houſe at Harlem was, from ſome unknown cauſe, ſeized with epilepſy, and on the frequent repetition of its paroxyſm, other children ſympathiſed, ſo that at length almoſt the whole ward were rendered epileptic. The attendant phyſicians being diſappointed in all

their

their attempts to ſtop the diſeaſe, it became ſo alarming, that Boerhaave was ſent for. Finding that the uſual remedies had been employed, he propoſed to have recourſe to the operation of Fear: for this purpoſe the children were ordered to be aſſembled in a room, where burning cauldrons, with a number of cauterizing irons, had been placed. With much ſolemnity, of courſe, he then addreſſed them; and concluded by ſaying, that the only remedy for their complaint was a *red hot iron.* He accordingly propoſed to his brethren who were preſent on the occaſion, that the firſt patient ſeized with a fit, ſhould inſtantly be burnt to the bone with one of the irons preparing in the fire. This proceeding had ſuch an effect, that the diſeaſe was immediately checked, and its progreſs prevented.

Not many years ſince, an epileptic boy in the Infirmary of Edinburgh was cured, I have been informed, by the ſight of one of the ſoldiers upon guard, preſented as an object of Fear. Other convulſive diſorders have ſometimes been removed by this paſſion, as the hiccup and hooping-cough.

For

For the cure of the latter, Dr. Willis, who wrote De Anima Brutorum, uſed to put young children into a mill-hopper, which, in his day, was a common, and ſometimes a ſucceſsful remedy. *

By the operation alſo of Fear, paroxyſms of gout are ſaid to have been removed, which, we can readily ſuppoſe, if the diſeaſe be admitted as an affection of the nervous ſyſtem. That this is the caſe, Dr. Cullen hath maintained, ſince almoſt all the occaſional or exciting cauſes of the gout act directly upon that ſyſtem.

Theſe and ſimilar inſtances related of the removal or prevention of diſorders by the operation of that Fear which conſtitutes Terror, lead ſome to attribute its effects to a tonic power: but as Terror is only a very high degree of Fear, I cannot aſſent to

* Cum medicamenta minus efficiunt, apud vulgus in praxi familiari eſt, ut pro torriculamento, dum molendinum ingens cum ſtridore, et rotarum aſpectu horribili circum agitur, affectus grani ſive frumenti receptaculo imponatur, indeque morbi hujus ſubito curatio nonnunquam contingit.

Willis.

ſuch

ſuch an opinion; ſince it is repugnant to philoſophy to ſuppoſe, that the increaſed force of an agent can occaſion any other than an increaſe of its effect. Upon other principles, therefore, I ſhall endeavour to account for the ſucceſs which hath ſometimes been derived from the influence of Fear.

It is well known, that intermittent fevers will recur periodically for many months after the exciting cauſe hath been removed, and without the interpoſition of any other with which we are acquainted. The epilepſy alſo, and other convulſive diſorders, and affections of the nervous ſyſtem, frequently return without any apparent cauſe. Hence one would infer, that the renewal of their ſeveral paroxyſms is often induced by the force of *habit*, independently of other cauſes. Whatever, therefore, juſt before the recurrence of theſe diſeaſes, affect in any conſiderable degree the brain or nervous ſyſtem, whether it be of a debilitating or ſtrengthening nature, may equally interrupt this *habit*, and thereby prevent their attack. But, it is farther

ther probable, that the return of ſuch diſorders is prevented by that *attention of the Mind*, which Terror inforces. In this, as well as in every other ſtrong emotion or paſſion, the Mind is wholly engaged by the object which excites it. Could Boerhaave, therefore, in the inſtance recited, have ſo fully engaged the attention of his young patients, by other means than thoſe he employed, I can readily ſuppoſe that the ſame good effect would have enſued: for as attention of the mind diminiſhes ſenſibility of body, it is probable that the exciting cauſes of epilepſy, and of other diſorders alſo, may in conſequence fail in their operation. However this may be, there are, I apprehend, few diſeaſes in which extreme Fear, or Terror, can be employed with advantage or ſafety.

In caſes of inſanity, this paſſion is obviouſly uſeful, as by its influence the moſt furious maniacs are often quieted. Hence phyſicians who attend ſuch patients, derive their conſequence and aſcendency, in proportion as they are able to excite dread. We accordingly obſerve the rage and obſti-

nacy uſually prevalent with mad people, generally ſubſide on the appearance of their phyſician or keeper, ſo that from theſe they readily take medicines, which they would not from the hands of others. In mania, therefore, Fear may always be employed with ſafety, and often with at leaſt temporary advantage.

There is, perhaps, another caſe in which it might be uſeful; in ſuppreſſion of urine, when occaſioned by ſpaſm in thoſe organs which ſecrete or tranſmit it. As, however, this particular cauſe of the complaint cannot be aſcertained, its application muſt be either equivocal or hazardous. The operation of Fear in the cure of diſeaſes is, indeed, in all caſes, ſo uncertain, that it ought, perhaps, to be laid aſide as a remedy, unleſs it could be employed with an addreſs and caution, which require a very great exertion of the human intellect.

In the preſent day, medical reſources are ſufficiently numerous to preclude the adventitious aid of terrific cauſes; and as the *general tendency* of Fear is injurious, I ſhould

ſhould think it prudent to exclude it entirely from the claſs of remedies, ſince we can neither direct nor reſtrain its operation.

As, however, in particular diſeaſes, and under ſome peculiar circumſtances, Fear hath been found uſeful, it is not improbable that practitioners, to whom opportunities have afforded but little experience, may be led to an indiſcriminate or haſty trial of it, when their patience hath been exhauſted, and their hopes fruſtrated, by the unſucceſful employment of medicines: thoſe, therefore, it may not be improper to caution, by inſerting the following from Pechlin; "Febres plurimas quas remediis vul-
"gatis fruſtra ſollicitari vidimus, terror non-
"nunquam ſanavit. Qua occaſione, invi-
"tati nonnulli methodum per terrorem cu-
"randi jactare auſi ſunt non perinde felici
"ſucceſſu, quod ad temperamentorum in-
"dividua juſtamque ſanguinis et fluidorum
"proportionem pauciſſimis penetrare da-
"tum eſt. Ruſtica ſanè eſt et ſemibarbara
"methodus, magno etiam periculo con-
"juncta terrorem, quem ipſi moderari et
"ſingulorum temperiei ex æquo accom-

" modare non poſſumus, in claſſe juvan-
" tium reponere et quod fortuito accidit,
" velut ab arte profectum admirari."

Before I conclude the preſent ſubject, I think it neceſſary to obſerve, that as Fear is a debilitating paſſion, and a diſpoſition to it may be either conſtitutionally formed or acquired from circumſtances which occur in early life, every parent ſhould guard againſt impreſſions made on the minds of children, by the narration of thoſe ſilly and terrific ſtories which haunt a nurſery. For although in maturer years the abſurdity of them will be ſufficiently obvious, yet their operation during the tender periods of life may, perhaps, ſo far affect the nervous ſyſtem, as to render it liable in future to be ſtrongly impreſſed by trivial cauſes.

CHAP. IX.

Of Grief.

THIS paſſion of the Mind, from whatever cauſe it may ariſe, is *extremely depreſſive* in its operation on the body. The action of the heart is ſo much weakened by it, that the blood is not ſufficiently propelled to the extreme veſſels: hence a ſettled paleneſs in the face is obſerved in thoſe who have been long diſtreſſed by Grief.

It is difficult to particularize thoſe diſorders, or deviations from health, to which this emotion diſpoſes the ſyſtem, and, indeed, it would be unneceſſary; for as its tendency is *depreſſive* in the *extreme*, it muſt be inferred that any of them may ariſe, which have been occaſioned by the mental cauſes of debility already noticed. Various affec-

affections of the ſtomach, however, are complaints which generally firſt happen ; as loſs of appetite, nauſea, a ſenſe of weight and fulneſs, &c. &c. accompanied frequently by a bitter or ill taſte in the mouth, and by either coſtiveneſs or diarrhœa ; diſturbed ſleep alſo, and a diminution of perſpiration and urine, are generally attendant circumſtances. The body in conſequence becomes emaciated and feeble, and the moſt beautiful countenance of youth is exchanged for the meagre viſage of age ; the eyes appear retracted within their orbits, the noſe ſharpened, and the features ſhrunk away. As the force of circulation is conſiderably weakened by the influence of this emotion, congeſtions and obſtructions in the abdominal viſcera are particularly liable to ſucceed its operation. Hence perſons afflicted by Grief are often carried off by dropſy, or by a gradual decay.

Among the variety of cauſes which occaſion Grief, there is one which makes an impreſſion on ſome minds that can never be eraſed, viz. *a ſeparation from friends and country*. When this happens, the moſt obſtinate

ſtinate bodily complaints enſue, ſuch, indeed, as cannot be removed by the power of medicines.

This cauſe of Grief hath been particularly noticed in the inhabitants of Switzerland, whoſe attachment to the *natale ſolun* is ſo conſiderable, that ſoldiers removed even from the Canton in which they were bred to an adjoining one of the ſame climate, have become ſo dejected, that they either died, or loſt their health and ſtrength, ſo as to be unfit for ſervice. In theſe, medicine was of no avail, and they recovered merely by returning to the diſtrict from whence they came.

Similar inſtances have happened in other countries, one of which occurring lately in our own, I ſhall inſert, as a ſequel to the preſent chapter :

Dr. Hamilton, of Ipſwich, gives the following relation—In the year 1781, while I lay in barracks at Tinmouth, a recruit, who had lately joined the regiment, was returned in the ſick liſt, with a meſſage

from his captain, requeſting I would take him into the hoſpital. He had only been a few months a ſoldier, was young, handſome, and well made for the ſervice; but a melancholy hung over his countenance, and wanneſs preyed on his cheeks. He complained of univerſal weakneſs, but no fixed pain; a noiſe in his ears, and giddineſs of his head. Pulſe rather ſlow than frequent, but ſmall and eaſily compreſſible. His appetite was much impaired. His tongue was ſufficiently moiſt, and his belly regular; yet he ſlept ill, and ſtarted ſuddenly out of his ſleep with uneaſy dreams. He had little or no thirſt.

As there were little obvious ſymptoms of fever, I did not well know what to make of the caſe. I ſuſpected he might be under an incipient typhus, and ordered what I judged neceſſary to obviate it. Some weeks paſſed with little alteration, either for better or worſe, excepting that he was evidently become more meagre. He ſcarcely took any nouriſhment, yet had hitherto ſat up out of bed ſome hours every day. At length he became indolent; ſeldom ſat up

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at all, was conſtantly doſing, yet his ſleep was never ſo ſound but he could anſwer when ſpoken to; he ſighed deeply and frequently, nor could his attention be directed to any external object. Something, it would ſeem, hung heavy on his mind. He never had any cough; yet ſince he came into the houſe had waſted away conſiderably. Exerciſe was recommended, and uſed as far as he could be rouſed to take it, which was never without reluctance. He was put on a courſe of ſtrengthening medicines; wine was allowed him: all proved ineffectual. His pulſe had changed with his appearance, and was now ſmall and quick; an evident fever of the hectic kind, as it ſeemed, with an evening exacerbation, took place. He had now been in the hoſpital near three months, was quite emaciated, and like one in the laſt ſtage of a conſumption. His eyes were grown hollow, cheeks prominent, nails incurvated; adnata pellucid; and he was ſo weak in his limbs, that he could neither get in or out of bed without help; of late alſo, he had night ſweats. In ſhort, I looked on him as loſt.

On making my morning viſit, and inquiring as uſual of his reſt at the nurſe, ſhe happened to mention the ſtrong notions he had got in his head, ſhe ſaid, of home, and of his friends. What he was able to ſpeak was conſtantly on this topic. This I had never heard of before. The reaſon ſhe gave for not mentioning it, was, that it appeared to her to be the common ravings of ſickneſs and delirium. He had talked in the ſame ſtyle, it ſeems, leſs or more, ever ſince he came inro the hoſpital.

I went immediately up to him, and introduced the ſubject; and from the alacrity with which he reſumed it, (yet with a deep ſigh, when he mentioned his never more being able to ſee his friends) I found it a theme which much affected him. He aſked me with earneſtneſs if I would let him go home. I pointed out to him how unfit he was from his weakneſs to undertake ſuch a journey (he was a Welchman) till once he was better; but promiſed him aſſuredly, without farther heſitation, that as ſoon as he was able he ſhould have ſix weeks to go home. He revived at the very

thoughts

thoughts of it. At this time, however, I made a promiſe which I knew it was not in my power to perform, without the conſent of the commanding officer, who alone can grant furloughs; but as my hopes of his recovery were very ſlender, my raſh promiſe could give me the leſs uneaſineſs; and my ſcheme was to animate his hopes, and endeavour thus to take advantage of the change that his Mind might undergo by it, to cooperate with me in removing, if poſſible, the malady.

It ſeems he had requeſted leave to viſit his native place ſoon after he joined; but being only a recruit, and but a few months from thence, he was refuſed. This had hung on his ſpirits ever ſince; and from thence I now dated the origin of his illneſs. I intreated him to take food to ſtrengthen him for his journey; and as ſoon as he was able to go out into the open air a little every forenoon, when the weather would permit, that he might be the ſooner able to go home. He liſtened eagerly to every word I ſaid. In ſhort, his appetite ſoon mended, and I ſaw in leſs than a week, evident ſigns

of recovery. He was now lively, though ſo weak that he could not get in or out of bed without aſſiſtance; he ſtrove to ſit up; two men took him between them in the heat of the day, and placed him on a ſeat they had erected for him on the beach, where he had a view of the ſhipping, for it was on the ſea-coaſt. In a little time he was able to walk. Every viſit I paid him he reſumed the ſubject of *the furlough*; which I perſiſted in promiſing, ſeeing the good effects it had already produced; and in leſs than two months from the time he had received this promiſe, he was able to leave the hoſpital and go to his barrack room.

I ſet myſelf about endeavouring, as far as in me lay, to accompliſh my promiſe; for he paid me almoſt daily viſits, aſſuring me he was able to undertake his journey, if I would allow him, for he firmly relied on my word. I was in ſome dilemma now how to act; yet his ſtory was already known throughout the regiment, and the eſcape he had from imminent death. The deception, however, if I had dropped it here, was tenderneſs, and a regard for his recovery; but

but I went farther : I made public to all the officers the method I fell on to recover him; and told them, moreover, that if I did not ſucceed in obtaining a furlough, I was ſure he would relapſe, as ſoon as he underſtood his expectations were to be fruſtrated. I won them over to my intereſt. The ſtory was publicly talked of. The commanding officer was likewiſe acquainted with it; and the requeſt was now made to him, which he obligingly granted.

CHAP.

CHAP. X.

Of Anxiety.

THIS paſſion appears to be of a mixed nature, and ſeems to ariſe from the alternate operation of Hope and Fear. The circumſtances which may occaſion it are various; but refer in general to the common concerns of life. There is, however, a certain ſtate, *dependent on the acquiſition of wealth*, to which mankind have affixed the term Proſperity, and which hath conſequently engaged their more particular attention: hence the poſſeſſion of riches hath been conſidered as the chief ſource of happineſs. When this opinion prevails, the Mind muſt be often agitated by conſiderable Anxiety; ſince riches are acquired by uncertain efforts, and numerous competitors occupy the ſame avenues in purſuit of them.

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The purſuit, indeed, after any object which we deem neceſſary to our happineſs or welfare, muſt be attended with ſome Anxiety.

This paſſion, therefore, is in ſome meaſure natural to every individual, and a propenſity to it is, perhaps, given to the human Mind, for the purpoſes of ſelf-preſervation and public good. Anxiety for perſonal welfare prompts us to the means of acquiring it, and a ſolicitude for honourable fame leads to actions of public utility. The mind is, however, ſometimes preternaturally anxious, or, in other words, anxious over-much: this generally ariſes from a depravity of judgement, which diſpoſes men to place either too high a value on what they have never poſſeſſed, or too weak a confidence in their preſent enjoyments. In the latter caſe they are often uneaſy, leſt ſome unforeſeen incident ſhould interrupt their tranquillity: ſuch, therefore, diminiſh their preſent happineſs, by entertaining apprehenſions for its continuance. An Anxiety of this kind is, in ſome inſtances, ſo conſiderable, that perſons whoſe ſituations in life afford the moſt ample means

of

of enjoying it, beoome truly miſerable by anticipating the poſſibility of a change.

There is, however, a ſource of Anxiety, of all others the moſt inſuperable, as it proceeds from thoughts which relate to a future ſtate of exiſtence. This may be termed *religious Anxiety*, and is not unfrequently excited in perſons of weak minds, by enthuſiaſtic teachers of religious duties. A melancholy circumſtance having happened within my own knowledge, in conſequence of ſuch Anxiety, I ſhall inſertit.

About fifteen years ago, a man in the neighbourhood of Fleet-ſtreet, of a very religious diſpoſition, and perpetually anxious to inſure a ſtate of happineſs in a future world, was found in a very ſhocking and dangerous ſituation. He had been attending to the diſcourſe of a very popular preacher on the ſubject of libidinous enjoyments, and from the impreſſion it made upon his Mind, he returned home with a full reſolution to eradicate what only, as he ſuppoſed, could occaſion a paſſion for them. He accordingly attempted caſtration, and would have com-

completed his deſign, had not the pain and faintneſs occaſioned by the operation, forced him to relinquiſh it. The late Mr. Crowther, who at that time lived in Boſwell-court, was employed in this caſe as ſurgeon.

In perſons who labour under a ſtate of Anxiety, the appetite for food is uncertain, and the pulſe irregular; being at one time ſlow, at another quick, and, in general, feeble. Sleep alſo is frequently interrupted by incubus, or frightful dreams. Theſe irregularities, more or leſs, prevail according to the light and ſhade, which brighten or cloud their proſpect.

Thoſe of anxious diſpoſitions may, notwithſtanding, paſs many years without ſuffering any ſubſequent bodily infirmity: at length, however, their nervous ſyſtem is ſo impaired by reiterated counteraction of Hope and Fear, which conſtitute the paſſion we treat of, that the whole body becomes relaxed, and liable to any of thoſe diſorders to which debility prediſpoſes.

Of the ſeveral organs which may be injured by the long continuance of this paſſion, the brain, as being primarily affected, is the firſt that in general gives way. This appears from a failure of memory, which uſually enſues, and from a diſtruſt and doubt the mind frequently entertains of the moſt common facts; hence fatuity or mania are the more frequent conſequences of obſtinate Anxiety.

It is incumbent, therefore, on every individual, in whom an anxious propenſity is conſiderable, to oppoſe it as much as poſſible, ſince it is, perhaps, more prone to increaſe by indulgence than any of the paſſions we have mentioned. For this purpoſe we ſhould endeavour by every means to divert the Mind from thoſe particular thoughts which uſually excite it. Hence the ſtudy of natural philoſophy, or of the arts, or any other ſubjects, whether of amuſement or profit, may be of the higheſt importance; as it is certain that where mental reſources have been feweſt, the paſſion of Anxiety hath prevailed the moſt. It accordingly happens, that perſons who have

withdrawn themſelves from the buſtle of public life to which they have been long accuſtomed, and eſpecially if they give up ſociety, which is often the conſequence, under a notion of eaſe and tranquillity, are more particularly liable to the intruſion of it. For ſuch is the conſtitution of our nature, that the Mind left to the ſociety of itſelf, ſoon deſtroys its own powers, and every faculty of enjoyment. The dulce otium, therefore, ſo often deſcanted upon, and which hath been the darling theme of men of buſineſs, as well as of poets, frequently proves a very conſiderable ſource of human diſquietude.

There is, perhaps, nothing better calculated to relieve the anxious Mind, than muſic; and there are few perſons, if any, totally inſenſible to its charms. We can readily, therefore, acquieſce in the well-known ſentiment of Shakeſpeare,* ſince we

* The man that hath no muſic in himſelf,
Nor is not mov'd with concord of ſweet ſounds,
Is fit for treaſons, ſtratagems, and ſpoils;

we apprehend that the inſenſibility or indifference to muſic which hath been ſuppoſed to exiſt, ariſes only from the nature of its compoſition, as not according with peculiar diſpoſitions. Every individual, I doubt not, will be affected by tones of ſome kind, and it matters not whether the mind be pleaſed with the notes of a bagpipe, or the melody of a flute. That ſtyle of muſic, therefore, which is adapted to the diſpoſition or taſte of perſons, will, no doubt, be uſeful in mitigating preſent cares, and conſequently in preſerving health.

The ancients entertained ſo high an opinion of the ſalutary influence of muſic, that they have recommended it as a remedy in diſeaſes: inſtances are accordingly related of its efficacy in the removal of gout and epilepſy, and in the cure of fevers, even of a peſtilential nature.

That muſic may be uſeful in alleviating the ſymptoms of particular diſeaſes, and

> The motions of his ſpirit are dull as night,
> And his affections dark as Erebus:
> Let no ſuch man be truſted.
>
> Merchant of Venice.

thereby

thereby remotely tend to reſtore health, is very probable, provided the compoſition be adapted to the nature of the complaint, and employed in a proper ſtage of it. For ex-example: the more ſolemn compoſitions being calculated to depreſs the Mind, and thereby weaken the energy of the brain, may be uſeful in inflammatory diſorders, by reſtraining that impetus of circulation which ſupports them, or by inducing ſleep.

On the other hand; in chronic caſes, and in low fevers, the lively ſtrains of muſic may be of advantage, if judiciouſly employed, as they exhilarate the Mind, and thereby invigorate the action of the nervous and arterial ſyſtems.

But whether the efficacy of muſic in the cure of diſeaſes be admitted or not, we muſt recommend it in the preſervation of health; as it tends either to animate hope, or repreſs the turbulence of paſſion.

"On every ſtring ſoft breathing raptures dwell,
"To ſoothe the throbbings of the troubl'd breaſt;
"Whoſe magic voice can bid the tides of paſſion
"ſwell,
"Or lull the raging ſtorm to reſt."

To

To urge farther the neceſſity of amuſing the Mind, in order to obtain the full enjoyment of health, were needleſs, as experience only can convince thoſe who entertain doubts on the ſubject. To experience, therefore, we appeal for a confirmation of what hath, in general, been advanced in the preſent Eſſay; relying more on the feelings of nature, than on the deductions of reaſon.

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